Remarks

Reconsideration and withdrawal of the rejections of the claims, in view of the amendments and remarks herein, is respectfully requested. Claims 1-7, 9-10, 29, 37, 47, 79-81, 83, and 85-86 are amended, claim 87 is added, and claims 13-28 are canceled; as a result, claims 1-12 and 29-87 are now pending in this application. The amendments are intended to further prosecution and are not intended to concede to the correctness of the Examiner's position or to prejudice the prosecution of the claims prior to amendment, which claims are present in an application related to the present application.

Amended claim 1 and new claim 87 are supported by originally-filed claim 1, and by page 20, lines 23-33 of the specification.

Amended claims 2-7, 9-10, 29, 37, 47, 79-81, and 83 are supported by originally-filed claims 2-7, 9-10, 29-37, 47, 79-81, and 83, respectively.

Amended claim 85 is supported by page 8, line 9 of the specification.

Amended claim 86 is supported by originally-filed claim 1 and by page 4, line 29-page 5, line 3, page 5, lines 11-18, and page 8, line 79 of the specification.

With respect to the requirement to cancel non-elected claims (page 2 of the Office Action), the Examiner is respectfully reminded that, in the Office Action dated June 26, 2002, the Examiner indicated that upon the allowance of linking claim 1, which links the inventions of Groups I-IV, the Restriction Requirement as to the linked claims would be withdrawn. Accordingly, claims 13-28 are canceled.

The Examiner and Mr. Ketters are thanked for the courtesies extended to Applicant's Representatives in the telephonic interview conducted on May 6, 2003 in which the rejections in the final Office Action were discussed.

The Examiner rejected claims 1, 4-5 and 10-12 under 35 U.S.C. § 102(b) as being anticipated by Qing et al. (Proc. Natl. Acad. Sci. U.S.A., 94, 10879 (1997)). This rejection is respectfully traversed.

Specifically, the Examiner asserts that the agent in Qing et al. relieves the inhibition of viral single-strand DNA synthesis by ssD-BP and so is encompassed by the claims. However, as shown in Figure 7 in Qing et al., adenovirus, hydroxyurea, genistein, and Ad E4orf6 inhibit a

protein tyrosine kinase which phosphorylates a cellular protein (ssD-BP). When ssD-BP is phosphorylated, second-strand viral DNA synthesis is inhibited. In contrast, the agents identified by the present methods alter transduction after viral binding to the cell membrane and before synthesis to an expressible form of the viral genome.

Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

The Examiner also rejected claims 1-12, 29-36 and 83-86 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The amendment to claim 1, to replace "receptors" with "cell membrane," renders this rejection moot.

The Examiner further rejected claims 1-6, 9-12, 83-84, and 86 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is respectfully traversed.

In particular, the Examiner asserts that an adequate description of the claimed method includes an adequate written description of an agent that alters transduction after viral binding to the cell membrane and before synthesis to an expressible form of the viral genome.

The Examiner is respectfully reminded that the invention is directed to a method to identify agents that alter AAV transduction. Agents which were tested included brefeldin A, an agent which enhances endocytosis, vinblastine sulfate, an agent which inhibits endocytosis, NH_4Cl, an agent which inhibits canine parvovirus uncoating, and proteosome inhibitors such as LLnL, which enhance endosomal processing and increase endosomal pH (Example 4). To determine whether an agent alters viral endocytosis, endosomal processing and/or trafficking to the nucleus, or viral uncoating, labeled virus may be employed in conjunction with appropriate assays, e.g., binding and uptake assays for endocytosis (Examples 2 and 6), microscopic or subcellular fractionation analyses (Example 3), or immunoprecipitation analyses (Example 6). Moreover, once agents are identified that alter AAV transduction, similar assays may be employed to screen for agents that enhance the activity of the identified agent.

Hence, withdrawal of the § 112(1) rejections is respectfully requested.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney 612-373-6959 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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Date May 30, 2003

By _____
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Reg. No. 39,665

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MAIL STOP RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on this 30th day of May, 2003.

Candis B. Buending
Name

_____
Signature